

Application Serial No: 10/539,421
Responsive to the Office Action mailed on: December 9, 2008

REMARKS

This Amendment is in response to the Office Action mailed on December 9, 2008. Claims 1, 4, 11, 17 and 18 are amended. Claim 1 is supported, for example, in the specification on page 22, line 25-page 26, line 2 and in Figures 2 and 5B. Claim 4 is amended to depend from claim 1. Claims 11 and 17 are amended to correct minor informalities. Claim 18 is amended for clarity. Claims 2, 3, 5 and 6 are cancelled without prejudice or disclaimer. No new matter is added. Claims 1, 4 and 7-18 are pending.

Drawing Objections:

Figures 1, 2 and 6B are objected to for failing to comply with 37 CFR 1.84(p)(5). With respect to Figures 1 and 2, the specification on page 11, line 27-page 12, line 10 is amended to specify the reference elements "W" and "L". Reference element "II" in Figure 1 is adequately described on page 9, lines 22-23 of the specification. With respect to Figure 6B, reference element "H" is replaced for clarity with element "H2" and the specification on page 26, lines 13-16 is amended to replace reference element "H" with "H2" for clarity and consistency with Figure 6A. Withdrawal of these objections is requested.

Specification Objections:

Several portions of the specification are objected to for informalities. Page 2, line 23 is amended to include a colon as requested by the Examiner. Page 7, lines 20 and 22 and page 15, lines 6 and 8 are amended to remove the capital letters in the term "Chemical Formula" as requested by the Examiner. Page 23, line 1 is amended to replace the term "no" with the term "not" as requested by the Examiner. Several other portions of the specification are amended for clarity and to fix minor typographical errors. Withdrawal of these objections is requested.

Claim Objections:

Claim 11 and 17 are objected to for informalities. Claim 11 is amended to remove the capital letters in the term "Chemical Formula" as requested by the Examiner.

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Claim 17 is amended to replace the term "chemical formula (2)" with the term "chemical formula (1)" as requested by the Examiner. Withdrawal of these objections is requested.

§103 Rejections:

Claims 1-6, 8, 12 and 18 are rejected as being unpatentable over Gotoh (US Patent No. 6,071,391). This rejection is traversed.

Claim 1 is directed to a thin analysis tool that recites, among other features, that one of the first and second electrodes provides an electron release region between said one electrode and the second plate when a voltage is applied across the first and second electrodes. The electron release region has a thickness between said one electrode and the second plate, and said one electrode and the second plate are spaced from each other by a facing distance that is no greater than 45 μm and no greater than a height portion of the thickness of the electron release region.

Gotoh does not teach or suggest these features. First, nowhere does Gotoh teach or suggest that one of the first and second electrodes provides an electron release region between said one electrode and the second plate when a voltage is applied across the first and second electrodes. Also, nowhere does Gotoh teach or suggest a facing distance that is no greater than a height portion of the thickness of the electron release region. Gotoh is silent in regards to an electron release region. However, even if Gotoh teaches an electron release region, Gotoh would likely have to provide both an electron release region and a non-electron release region between one of the electrodes and the plate facing the electrode, due to the distance between the plates 1 and 1' being between 100-500 μm . Thus, Gotoh at a minimum is silent on these features, and based on the distance range of 100-500 μm between plates 1 and 1', more likely teaches away from a facing distance that is no greater than a height portion of the thickness of the electron release region.

Also, Gotoh does not teach or suggest a facing distance that is no greater than 45 μm . The rejection asserts that it would require mere optimization to discover the optimum range of no greater than 45 μm . However, there is a significant difference between the range ($\leq 45 \mu\text{m}$) recited in claim 1 and the range suggested by Gotoh (100-500 μm). Moreover, a facing distance that is no greater than 45 μm is not a simple

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optimization. In contrast, this feature prevents the facing distance from exceeding the height portion of the thickness of the electron release region, as discussed above.

An advantage of the tool in claim 1 is that measurement errors due to failure of the electron release from the reagent can be reduced. Gotoh does not contemplate these effects and therefore provides no motivation to drastically reduce the distance between the plates 1 and 1' from a range of 100-500 μm to a range of no greater than 45 μm . For at least these reasons claim 1 is not suggested by Gotoh and should be allowed. Claims 2-6, 8, 12 and 18 depend from claim 1 and should be allowed for at least the same reasons.

Claim 7 is rejected as being unpatentable over Gotoh in view of Heller (US Patent No. 6,576,101). This rejection is traversed. Claim 7 depends from claim 1 and should be allowed for at least the same reasons described above. Applicant does not concede the correctness of this rejection.

Claim 9 is rejected as being unpatentable over Gotoh in view of Leong (US Patent No. 6,837,988). This rejection is traversed. Claim 9 depends from claim 1 and should be allowed for at least the same reasons described above. Applicant does not concede the correctness of this rejection.

Claims 10, 11 and 13-17 are rejected as being unpatentable over Gotoh in view of Nagakawa (WO 03/025558 and English equivalent US Patent No. 7,390,391). This rejection is traversed. Claim 7 depends from claim 1 and should be allowed for at least the same reasons described above. Applicant does not concede the correctness of this rejection.

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Conclusion:

Applicant respectfully asserts that claims 1, 4 and 7-18 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



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Respectfully submitted,

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